

SOIL EROSION BY WATER



Erosion Hurts Your Garden and Long Island Sound

Driving rain and rushing water can carry away soil particles, organic matter, plant nutrients and pesticides. This **water-soil-chemical** mix finds its way to ponds, recharge basins, streams, storm sewers and ultimately Long Island Sound. Fine soil particles cause cloudiness in natural waters and excess nutrients may cause unnatural and ecologically disastrous blooms of algae. Pesticides, even in small quantities, may affect the health of fish and those who eat them.

Sound Gardening practices can help you control soil erosion and improve water quality.

The Sound Gardening approach is to prevent **soil** erosion, thereby reducing runoff and contamination of Long Island Sound by:

- planting ground covers, shrubs and trees to promote infiltration of water
- covering bare areas as soon as possible
- directing water across vegetated areas to promote infiltration.

The Susceptibility to Soil Erosion Depends on:

Soil cover – type and percent of coverage

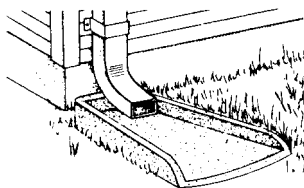
Soil type – the most erosion prone soils are silty or sandy

Grade – sloping areas are more likely to erode.

How to Spot Erosion

A gully is obvious evidence of soil erosion. Not all erosion is this easily recognized. Look around for these other signs:

- * muddy or cloudy water in the driveway, roadway or gutter following rain or watering
- * bare spots in lawns
- * newly exposed tree roots (however, some species, such as maple, grow this way naturally)
- * small stones or rocks appearing where none were before
- * small rills or gullies beginning to show
- * deposits of fine soils, usually in low lying areas
- * soil splashed on windows and outside walls
- * widening or deepening of stream channels
- * fallen trees in stream channels
- * cloudy or muddy appearance of surface water bodies (ponds, lakes, Long Island Sound).



Prevention and Remedies

Redirect Water

Observe the flow of stormwater before considering vegetative control of erosion. Large amounts of soil can be carried by water as it gains speed on a slope. Structural means of redirecting water may be necessary when slopes are steep and erosion is severe. Diversions placed atop a slope or terracing throughout will slow the water, reduce erosion and allow for plant establishment. Professional advice may be necessary where land value is high or damage to property or life is possible.

For more information on **Sound Gardening** and erosion, contact your local Cooperative Extension or Soil Conservation Service office.

In Connecticut:

Storrs: (203)486-3435
Fairfield: (203)797-4176
Hartford: (203)241-4940
Tolland: (203)875-333 1
Windham: (203)774-9600

Litchfield: (203)567-9447
Middlesex: (203)345-45 11
New Haven: (203)789-7865
New London: (203)887-1608

In New York:

Nassau (5 16)454-0900
Suffolk (5 16)727-7850
Westchester (914)682-3072

Sound Gardening was made possible through the combined efforts of Cornell Cooperative Extension of Nassau, Suffolk, and Westchester Counties, University of Connecticut Cooperative Extension System, Nassau County Soil Conservation Service and the Sea Grant Programs of New York and Connecticut. Artwork by Susan Stone.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Connecticut and Cornell Cooperative Extension Systems, Kirvin Knox and Lucinda A. Noble Directors, the University of Connecticut and New York State Colleges of Agriculture and Life Sciences, Human Ecology and Veterinary Medicine at Cornell University.

The Cooperative Extension System provides equal program and employment opportunities.

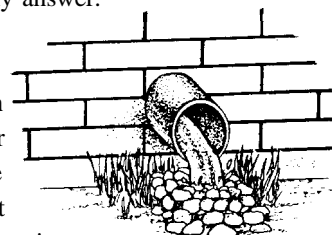
Printed on Recycled Paper

Cover the Soil

Bare soil is the primary source of erosion. Re-establish vegetation as soon as possible wherever soil is exposed. Grass clippings, straw or any other temporary cover will reduce erosion until permanent vegetation can be established. In heavy traffic areas where plants cannot be used, a permanent mulch of stone, bark, woodchips or a hardened walkway may be the only answer.

Protect Vegetation

Protect vegetation where high water velocities are expected. For example, use a concrete splashblock at the rain gutter outlet and place stones at the outlet of any pipe.



Plant the Right Vegetation

Get the right kinds of plant varieties growing in the yard. When re-establishing vegetation, be certain that the soil, sunlight, drainage and moisture are adequate.

Observe what plants are growing in similar situations and use them. There are many species that lend themselves to erosion control:

autumn olive	turf grasses	crown vetch
honeysuckle	shore juniper	shrubby dogwood
sumac shrub	bird's foot trefoil	

Correct planting and good care will encourage quick establishment and cover.

REMEMBER

- * Keep soil covered.
- * Redirect water flow on slopes.
- * Plant the right vegetation.
- * Preventing erosion protects your soil and the Sound!